

REMARKS

In the amendments above, Claims 1, 5, 6, 8 to 10, and 13 have been amended and new Claims 14 to 21 have been added, to more particularly point out and distinctly claim Applicants' invention. Support for new Claims 14 to 21 can be found in, for example, Claims 1 to 13.

An application data sheet with Applicants' information is attached hereto.

Claims 1, 2, 8, and 9 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Ikeda et al., U.S. Patent No. 5,801,773 ("Ikeda"). Claims 3 and 4 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Ikeda in view of the Smith article ("Smith"), and Claims 11 to 13 have been rejected under § 103(a) as being unpatentable over Ikeda in view of Koseki et al., U.S. Patent No. 7,098,946 (Koseki").

Applicants respectfully traverse these rejections.

Ikeda is directed to producing a high dynamic range (HDR) image from two or more images obtained at different exposures, using a mask constructed based on intensity. Ikeda addresses the problem of artifacts created at the edge lines by applying intensity curves of different shapes (for example, cosine ratio of charge – see Figs. 36a 36b in Ikeda). Ikeda works on the intensity domain.

The present invention takes a substantially different approach by applying low-pass filter on the combination mask (weight values). Low pass filter is a spatial smoothing tool which is NOT intensity related. Low pass filter would yield a good smoothing effect of the mask in cases where Ikeda's intensity curves would fail. For example, where the intensity is in the form of a step, Ikeda's combining function would

result in a step, as opposed to a smoothed transition in the combined mask of the present invention.

In the present invention (para 54, 55) Applicants demonstrate a subsampled version of the mask, calculated using decimated image and then low pass with IIR filter - this is clearly a spatial approach. In view of these differences, at least Claims 1, 2, and 8 are distinguishable over Ikeda.

With regard to Claim 9, Ikeda deals with global motion (typically associated with camera movement), applied on the entire image. The suggested correction method addresses motion of one or more objects within the images scene, and comprises aligning (“correcting coordinates” as Ikeda refers to it) both images; moreover, Ikeda is using the motion information to register the images ( moving one of them at list) so they will best fit, but do not change the combination mask, while the suggested correction method does not require registration of the images, but uses changes in the combination mask to compensate for the motion .

With regard to Claims 3 and 4, Smith does mention the possibility of combining images in the compressed domain. However, Smith admits that “no one has determined how to generate a matte directly on compressed data ...” (page 4, end of 4<sup>th</sup> paragraph). In the present invention such a combination is demonstrated. The present invention enables this combination based on the fact that low-pass filter is used. Furthermore, it would have been impossible to obtain a matte directly in the compressed domain using Ikeda’s intensity curves. This emphasizes the substantial difference between Ikeda’s intensity approach and the present invention’s low-pass filter approach; moreover, in Ikeda’s approach of motion compensation by registration, the compressed domain calculation is not practical, while with the suggested mask only motion compensation and low pass filter, it is possible.

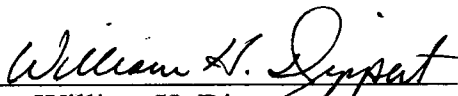
With regard to Claims 11 to 13, Koseki suggests upon detecting motion to turn off the output of the synthesized image and to use one of the original images instead. This is a global approach that does not try to preserve the combination of two (or more) images in areas where there is no motion, in a case where motion is detected on substantial amount of pixels. Contrary to the approach in the present invention, motion is treated locally only on pixels where it is detected while preserving WDR in pixels where no motion was detected.

Applicants believe that the comments above and the amendments to the claims herein should demonstrate that the claims are patentable over the references cited. Accordingly, withdrawal of the rejections based on §§ 102(b) and 103(a) is respectfully requested.

Reconsideration and allowance of all the claims herein are respectfully requested.

Respectfully submitted,

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